

WHAT IS CLAIMED IS:

1. A spiral conveyor apparatus, comprising:
  - a plurality of conveyor segments arranged as a spiral, including at least an entry segment at a first level and an exit segment at a second level, each conveyor segment having a plurality of freely rotatable roller devices forming a conveying surface;
  - a powered roller mounted in each segment, each powered roller being individually powered and individually controllable for selected rotation;
  - means for sensing a conveyed article in each conveyor segment; and
  - means for receiving signals from the sensing means and responsively controlling the powered rollers in a transport mode for transport of articles and in an accumulate mode for accumulation of articles.